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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,217	11/12/1999	CHRISTOPHER BURKE BARROSO	2-11-36	1398

7590

12/02/2002

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EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT

PAPER NUMBER

2681

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/439,217

Applicant(s)  
Barroso et al.

Examiner  
Joy Contee

Art Unit  
2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Sep 3, 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, and 10 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 11, and 12 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sep 3, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed September 3, 2002 have been fully considered but they are not persuasive. Regarding Noguchi, U.S. Patent No. 4,607,257, Examiner contends that the first word of the first minorframe in the reference time data reads on specifying a frame boundary of reference system pulse (col. 6, lines 30-35). The reference timing generator inherently provides a reference system pulse (see col. 6, lines 30-33 and Figs. 5B and 5D) and the first word creates a frame boundary on the leading edge of the pulse, such that the transition of time data occurs timely (col. 5, lines 3-9)

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Noguchi, U.S. Patent No. 4,607,257.

Regarding claim 1, Noguchi discloses a method of time calibration comprising the steps of:

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determining a calibration time using system timing information and embedded satellite timing information (col. 8, lines 20-32); and

transmitting the calibration time and a reference frame identifier (i.e., reference time, frame identification word), wherein the reference frame identifier specifies a frame boundary (i.e., reads on first word  $W_0$  of the first minorframe) of a reference system pulse (i.e., reference time generator generates a timing pulse from its oscillator) corresponding to the system timing information (col. 4, lines 44-45 and col. 6, lines 25-37 and col. 9, lines 15-29).

Regarding claim 2, Noguchi further discloses a method of time calibration comprising the steps of:

receiving at a receiver a message having a calibration time and a reference frame identifier (i.e., frame identification word), wherein the message is received over one or more frames, the reference frame identifier specifying a frame boundary (i.e., reads on first word  $W_0$  of the first minorframe) of a reference system pulse (i.e., reference time generator generates a timing pulse from its oscillator), the calibration time being determined using satellite timing information and the reference system pulse (col. 3, lines 26-34 and col. 4, lines 19-45); and

synchronizing the receiver to satellite timing using the calibration time, the reference frame identifier and a reference point in a frame specified by the reference frame identifier (col. 4, lines 66-67 to col. 5, lines 1-32).

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Regarding claim 3, Noguchi discloses the limitations of claim 1, comprising the additional step of: receiving a request to perform timing calibration prior to the step of determine the calibration time (col. 7, lines 67-68 to col. 8, line 2).

Regarding claim 4, Noguchi discloses the method of claim 1, wherein the step of determining the calibration time comprises the steps of:

detecting at least one satellite signal (col. 2, lines 20-25); and  
determining the embedded satellite timing using the detected at least one satellite signal (col. 3, lines 26-33).

Regarding claim 5, Noguchi discloses the method of claim 4, comprising the additional step of:

inherently receiving Doppler frequency information (i.e., since the received signals are frequency converted the frequency must be known) associated with the at least one satellite signal being detected prior to the step of detecting the at least one satellite signal (col. 26-36).

Regarding claim 6, Noguchi discloses the method of claim 4, comprising the additional steps of:

receiving aiding information (e.g., command for controlling the satellite) associated with the at least one satellite signal being detected prior to the step of detecting the at least one satellite signal (col. 3, lines 12-25).

Regarding claim 8, Noguchi discloses the method of claim 1, comprising the additional step of: transmitting an estimating frequency or code phase search range (col. 4, lines 12-18).

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*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi, in view of, Abraham et al., (hereafter "Abraham") U.S. Patent NO. 5,510,797.

Regarding claim 10, Noguchi discloses the limitation of claim 2. Noguchi fails to explicitly disclose, wherein the step of receiving at the receiver the message having the calibration time and the reference frame identifier comprises: time stamping the message to indicate a time at which the message was received by the receiver.

In a similar field of endeavor, Abraham is evidence of a user time stamping a calibrated signal such that the recipient will know if the message is current or old (col. 6, lines 53-67).

At the time of the invention it would have been obvious to one of ordinary skill in the art to have modified Noguchi to include a time stamp on the calibration message for the purpose of identifying the relevancy of the calibration message, i.e., current or old..

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***Allowable Subject Matter***

6. Claims 7, 9, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose in combination with the calibration method of the independent claims receiving a holding time for indicating when the aiding information expires; transmitting a time for indicating a time duration wherein the estimated frequency of code phase search range is valid; and determining a second calibration.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Greer et al., U.S. Patent No. 5,697,082, discloses a self-calibrating frequency standard system.

Loomis, U.S. Patent No. 5,899,957, discloses a carrier phase differential GPS corrections network.

Witsaman et al., U.S. Patent No. 5,416,808, discloses an apparatus for synchronizing a plurality of clocks in a simulcast network to a reference clock.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K. Contee whose telephone number is (703) 308-0149. The Examiner can normally be reached between 5:30 a.m. and 2:00 p.m., Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached on (703)305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service whose telephone number is (703)306-0377

**Any response to this action should be mailed to:**



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Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314 (for formal communications intended for entry)

**Or:**

(703) 872-9314, (for informal or draft communications, please label

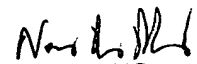
"PROPOSED" or "DRAFT")

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*



Joy K. Contee

November 16, 2002

  
**NAY MAUNG**  
**PRIMARY EXAMINER**